



TROOPER

The spacing robot for
nurserymen and horticulturists



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Introduction

MADE IN FRANCE



The Company

INSTAR Robotics is an innovative French company that designs, develops and manufactures autonomous mobile robots for agricultural logistics since 2018.

The first robot in the range is TROOPER, an autonomous robot dedicated to nurserymen and horticulturists. It handles pot-plant operations: spacing, re-tightening, grouping, freeing operational time and compensating for labor shortages.

Our robot helps reduce physical strain and refocuses people on their core job by eliminating tedious and low-value tasks.

TROOPER operates fully autonomously, day and night, on all types of surfaces, inside tunnels and greenhouses as well as outdoors.

Our Partners

They trust us and support us.



TROOPER

All Container Types!

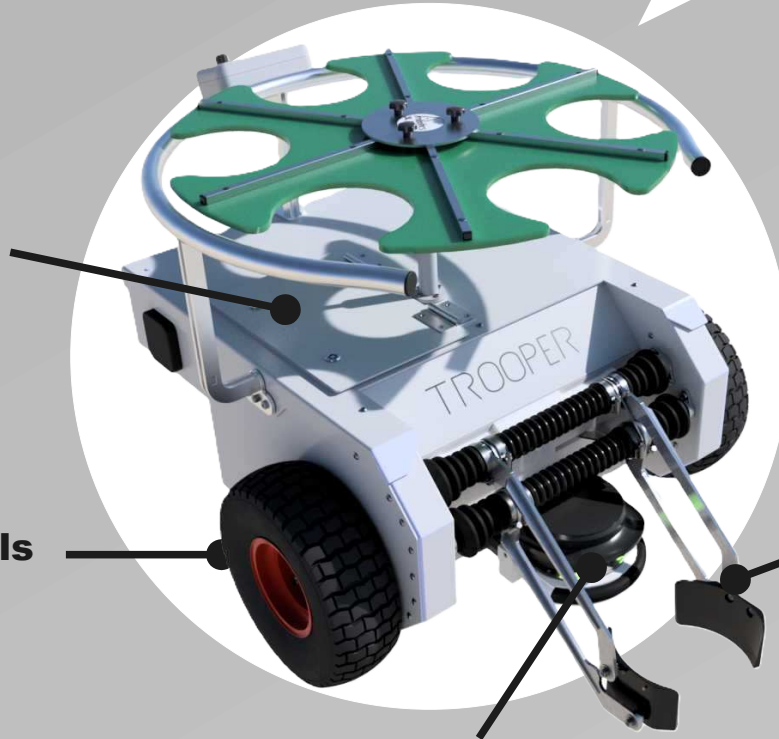
- Round and square-round pots from 12cm to 7.5L
- Troughs / bowls / hanging pots
- Trays / packs / carrier flats

10h on Battery

Quick replacement.
24/7 operation with
multi-battery pack.

All-terrain Wheels

Operates on uneven
ground.



Gripper

Adapts to pots
from
12 to 26 cm.
Max weight 7 kg.

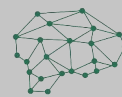
Perception Under All Conditions

Unaffected by bad weather.
Recognition, tracking, safety.



100% Electric

10h of autonomy.
Silent and non-polluting.



100% Autonomous

Reactive and adaptive
artificial intelligence.



Continuous Work

Operates day and night 24/7
with the multi-battery pack.



Precise Spacing

Precision ± 1.5 cm on the row.
+15% pots/m² density.



Mobility

Maximum speed: 5 km/h
Obstacle clearance: 5 cm
Maximum slope: 5%
Working width: up to 12 meters
Unlimited working length



Small but Robust

Compact (65 kg, 75×60 cm).
Weather-resistant (IP54).
Indoor and outdoor use.

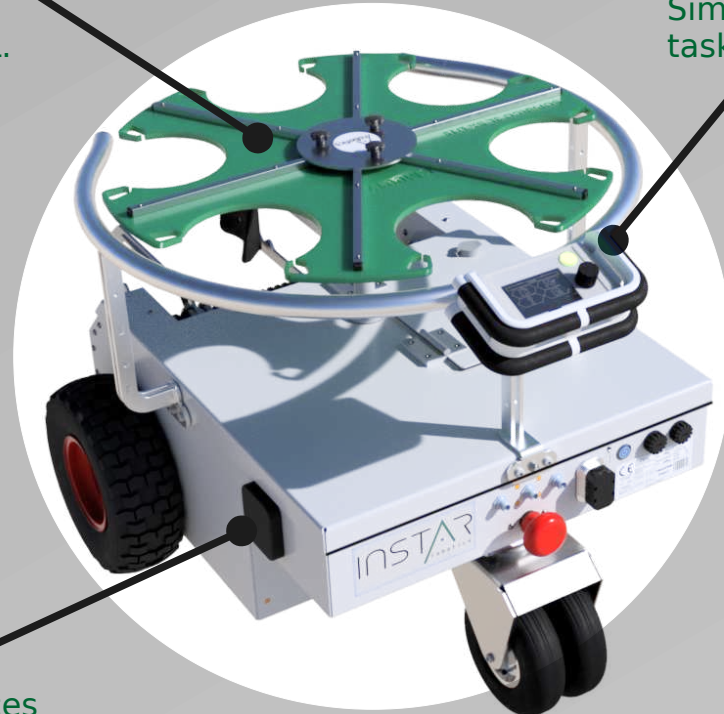
Le robot compagnon des pépiniéristes et horticulteurs

Magasin platform

Up to 7 pots at once.
Pots from 12 cm to 7.5 L.

Control Interface

Simple and intuitive
task configuration.



Connectivity 4G

Remote After-sale services
SMS alerts, updates



Reduced Strain

Lower risks of MSDs
(musculoskeletal disorders).



Predictability

Secure your planning.



Profitability

Average return on
investment: **3 years.**



Peace of Mind

Forget the stress of hiring
seasonal workers.



Connectivity

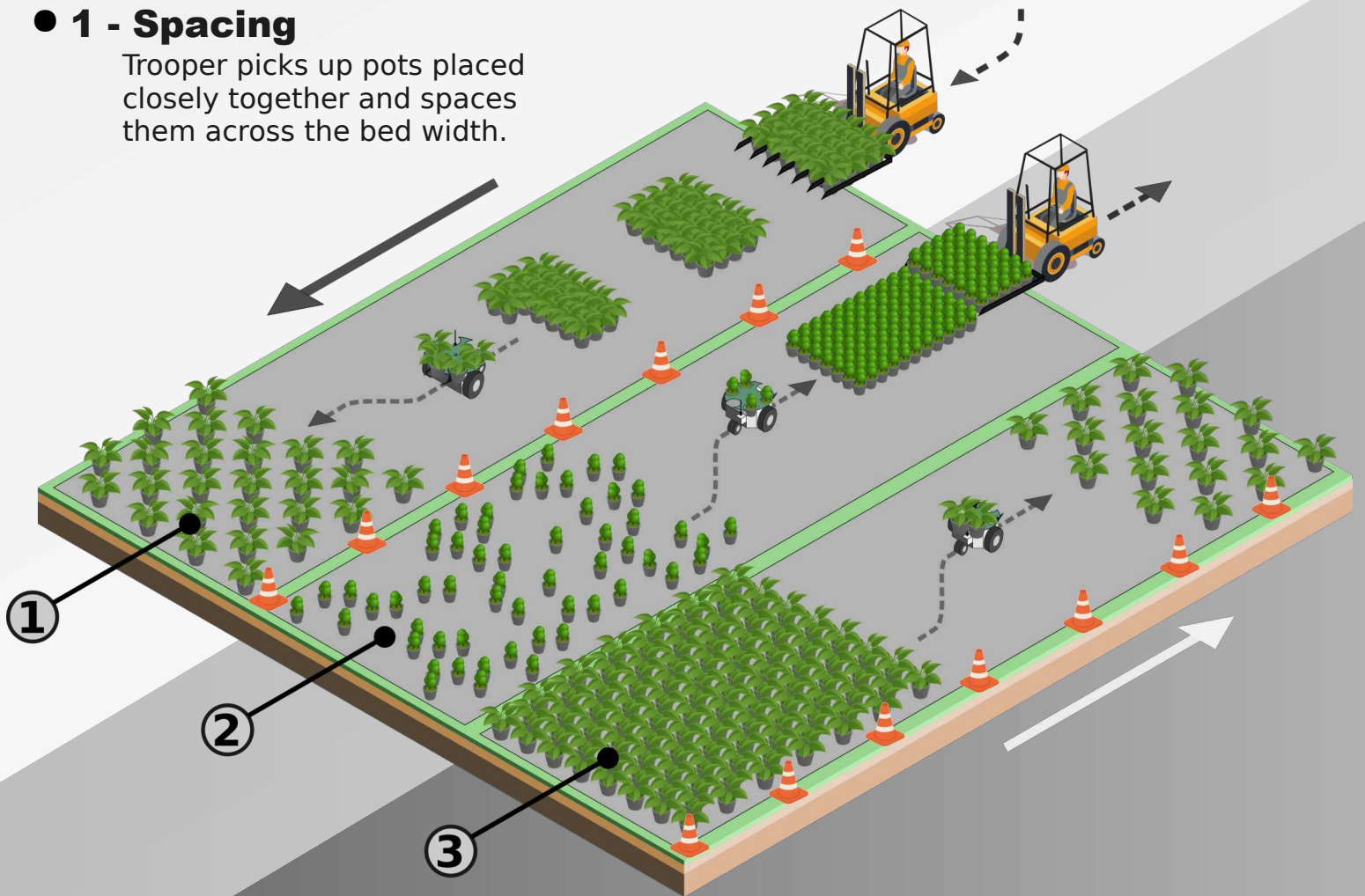
Remote updates.
Efficient and reactive remote support.
Automatic SMS alerts.

Use Cases



● 1 - Spacing

Trooper picks up pots placed closely together and spaces them across the bed width.



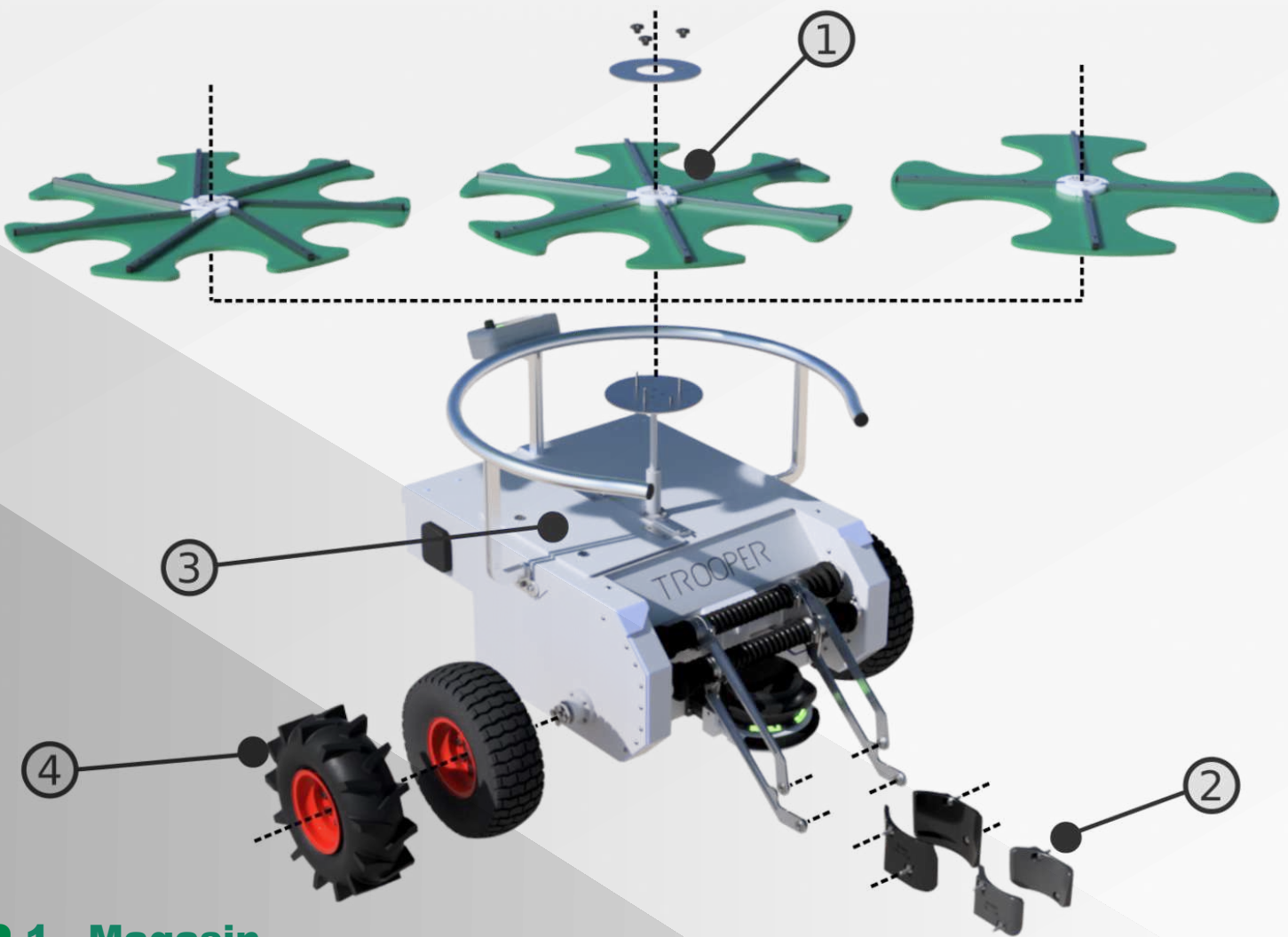
● 3 – Grouping & Re-spacing

Trooper gathers already spaced pots as close as possible, or spaces them again with wider intervals.

● 2 – Re-tightening & Consolidating

Trooper regroups scattered pots into a tight pile. The grouped pile can then be taken with forks.

Modularity



- **1 - Magasin**

Quickly interchangeable when changing pot size.

- **2 - Hands**

Quickly interchangeable depending on pot volume.

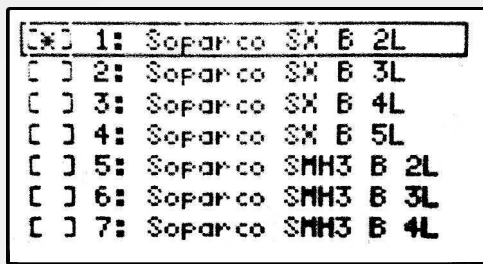
- **3 - Battery**

Removable via a hatch on the hood.
+10h additional autonomy.

- **4 - Tires**

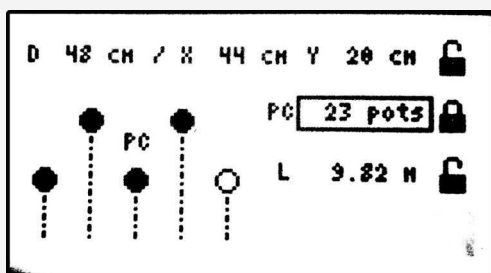
Optional mower-type or tractor-type tires depending on terrain.

How It Works



Step 1 : Select a Pot

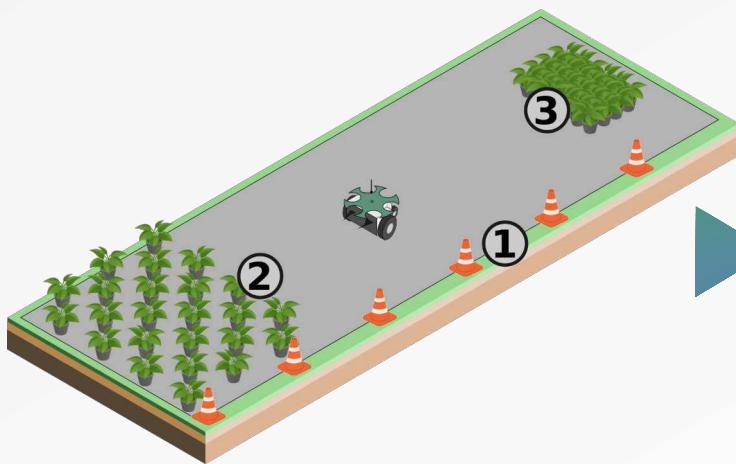
On the control box, access the pot list and select the desired pot.



Step 2 : Configure Spacing

Enter desired spacing parameters:

- Inter-pot distance
- Number of rows
- Bed width
- Footpaths, drop angle, etc.



Step 3 : Show the Robot 3 Points

Move the robot to show reference points:

- 1 - Cones
- 2 - Drop zone
- 3 - Pick-up zone



Step 4 : Start Autonomous Mode

Start the task with a single click.

Let's go !



Advantages

Compared to other solutions, Trooper show several advantages, apart from the price difference :

Quality:

- Optimal staggered spacing
- **+10–15%** pots/m²

Granularity:

- Manage production **locally**
- If one Trooper stops, 100% of production is not halted.

Asynchronicity:

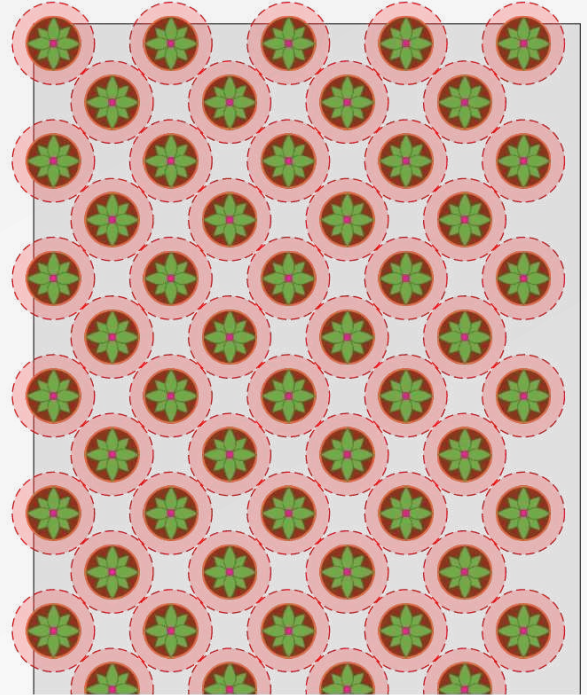
- Place pot piles anytime.
- Perform other tasks while Trooper spaces pots day/night.
- **No synchronization** with potting machine.
- **No dependency** on the production chain.

Modularity:

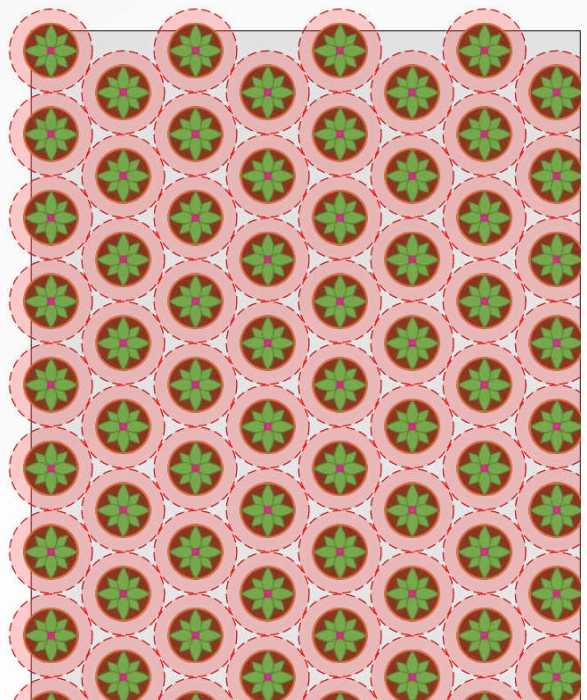
- Works on uneven terrain, narrow beds, tunnels, indoors and outdoors.
- Spacing, re-tightening, grouping, re-spacing.
- Additional operations: fertilizing, trimming, pest trapping. (see page 11).



**Classic manual
or fork spacing**



**Optimized
Trooper spacing.**



Containers

Standard Round Pot

- 2L to 10L
- Up to 29 cm diameter



Small Round Pot

- Under 2L
- From 12 cm diameter



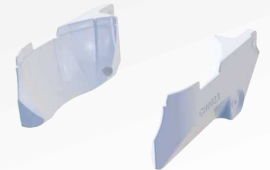
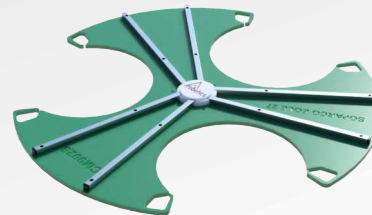
Square & Square-Round Pots

- 1L to 7.5L



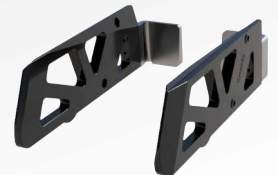
Bowl, Saucer & Hanging Pots

- Up to 29 cm diameter



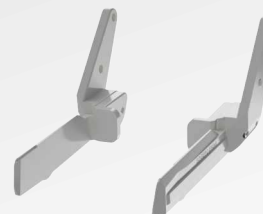
Planter

- Up to 40 cm long



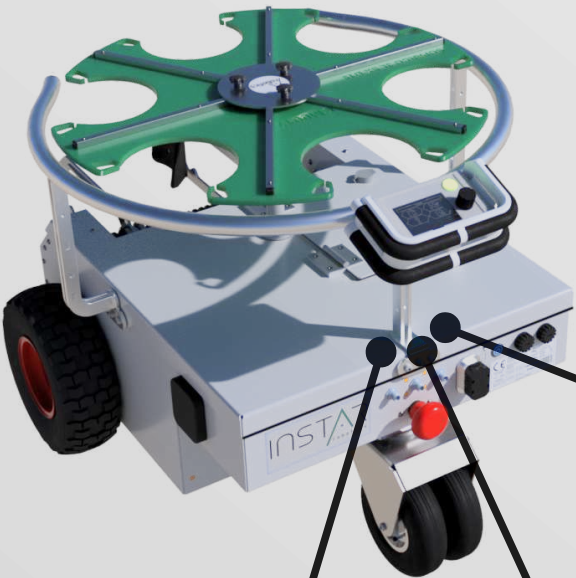
Tray & Carrier Flat

- Up to 40 cm long

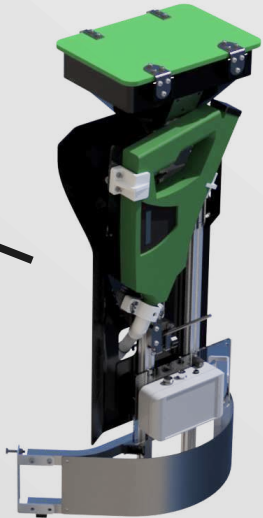


Extensions

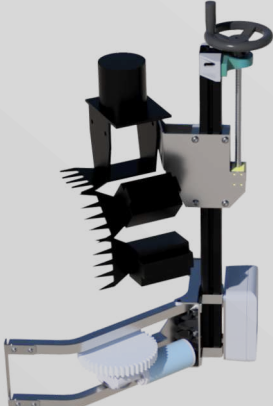
Trooper can be equipped with modules for fertilizing, trimming, or pest trapping.



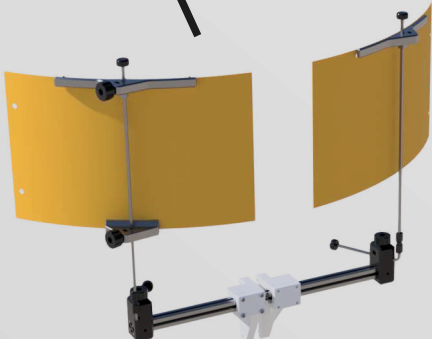
These operations can occur during spacing, re-tightening, or grouping.



**Fertilizer Spreader
FertiBot**



Trimmer TrimBot



Pest Trap : FlyTrap

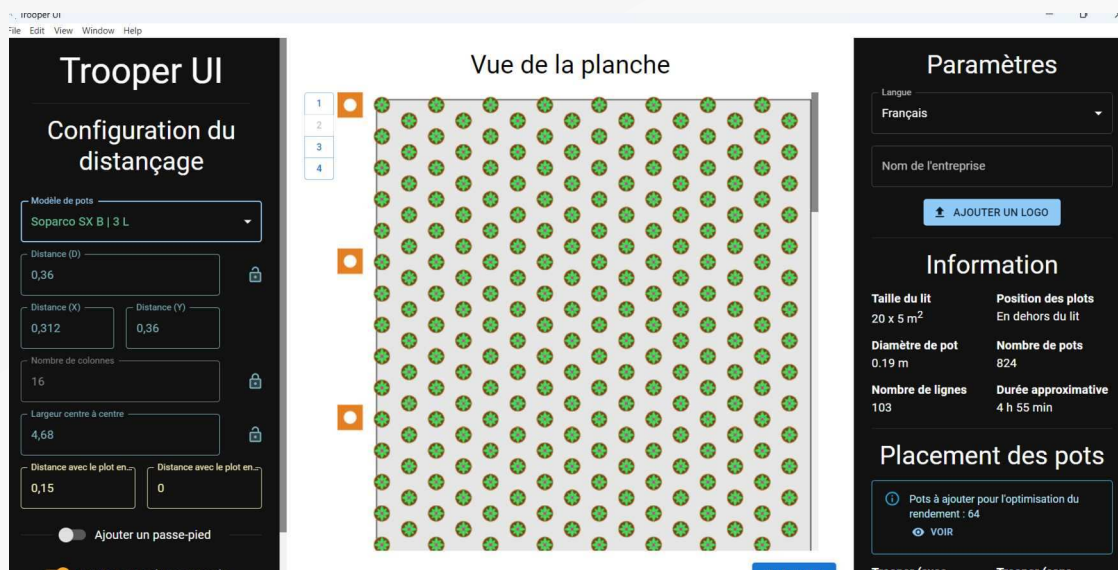


TrooperUI helps configure production beds for TROOPER.

It allow to **visualize spacing**, optimizes **pot density**, and computes **where to place pot** piles.

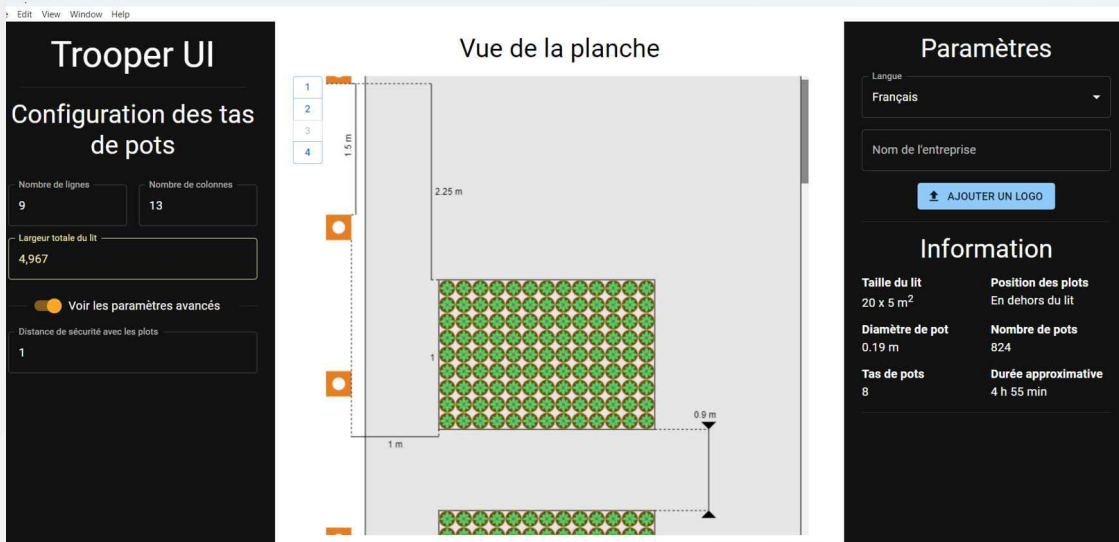


- Enter bed dimensions.



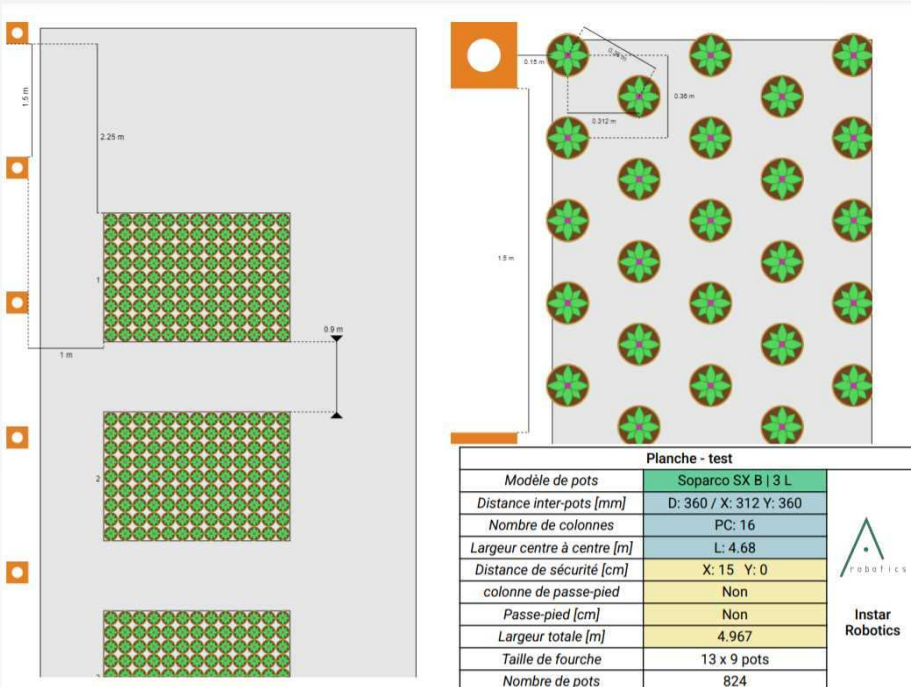
- Select a pot.
- Configure spacing and number of rows.
- Add footpaths.
- Visualize instantly pots/m², estimated duration.

- TrooperUI processes automatically where to place pots piles based on fork width.



- Export a PDF summarizing spacing and pot placement.

PDF File



Variety Changes



- Keep variety order.
- Configure spacing for drip lines.

Drip Lines



Testimonials



Emmanuel Freulon

Cadre, Chef de culture chez Pépinières Ramette
2 mois



Zoom sur Instar robotique et son invention Trooper.

Voici un an maintenant que nous travaillons avec le robot Trooper.

Après des débuts compliqués compte tenu de la spécificité de nos plateformes (bombées, molles par endroits et glissantes) les gens d' Instar robotique, par leur réactivité et leur persévérance, sont en passe de réussir leur challenge. Faire fonctionner sans problème le robot dans des conditions difficiles.

Bravo à toute l'équipe et plus particulièrement à Adrien et Pierre pour avoir déjoué tant de difficultés chez nous.



Testimonials



JARRY Productions Horticoles

815 abonnés

3 mois



[Robot TROOPER]

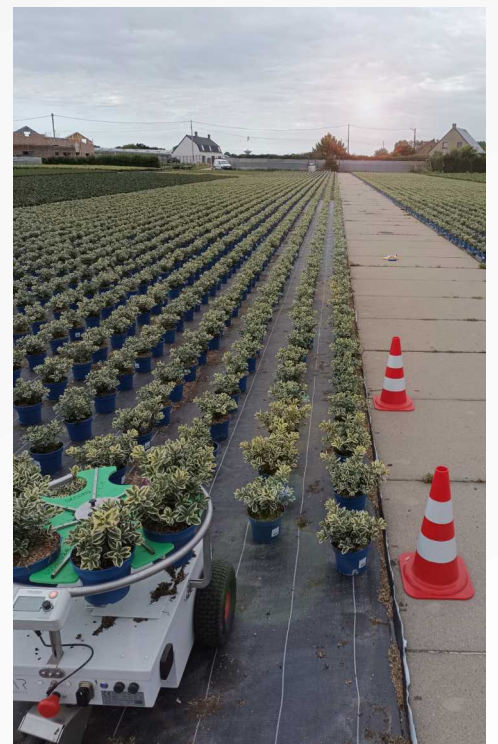
Cela fait un an que notre robot TROOPER **INSTAR Robotics** nous assiste dans le distancage de nos cultures en pots C3L / 19 cm. En 2023, plus de 45 000 pots ont été distancés grâce à TROOPER et son intelligence artificielle. Il contribue à alléger la charge de travail de nos équipes et à réduire la pénibilité de ces tâches. Et L'équipe lui dit « MERCI !!! 😊 😊 »

TROOPER est 100 % électrique et fonctionne en toute autonomie pendant 10 heures, silencieux et non polluant, il s'inscrit dans notre politique RSE.



Testimonials

OB PLANTES



Testimonials



Maison Barrault

1 166 abonnés

7 mois • 🌐

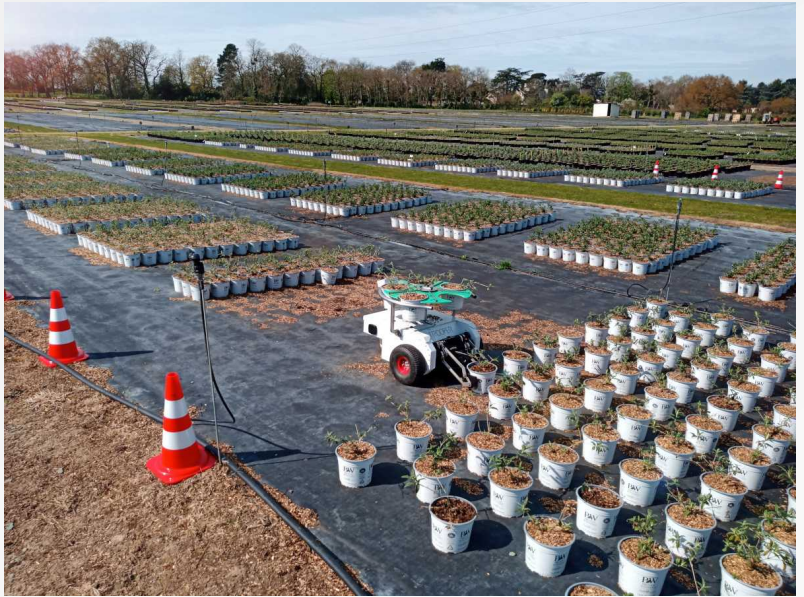
Voici Trooper, notre tout dernier arrivé dans l'entreprise ! Une création signée **INSTAR Robotics**. Après de longues années de partenariat, Trooper est désormais parfaitement adapté à notre fonctionnement. Il va grandement réduire la pénibilité du travail de placage des cultures, permettant ainsi à nos équipes de se concentrer sur d'autres chantiers cultureux 🤖.



Testimonials

HORTiVAL

diffusion

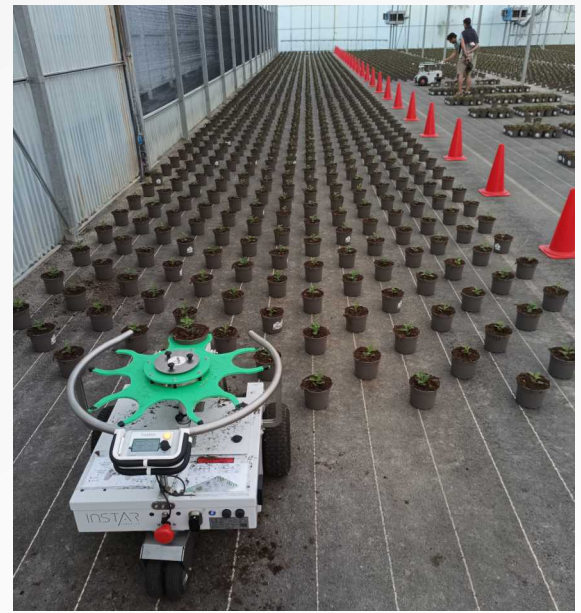
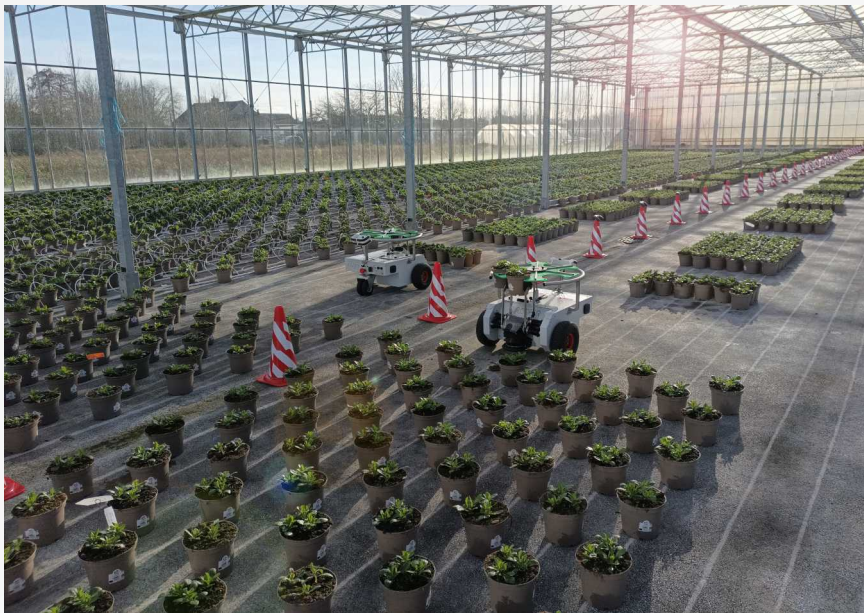


Testimonials

V Horticoles Viet



Testimonials



Testimonials



Luc Guilemain • 1er
Chef d'entreprise ,coqérant Bourqogne Plantes
1 mois • 🌱

**BOURGOGNE
PLANTES**

Notre petit nouveau Trooper de chez [#instar robotics](#) # à pratiquement finit de desserrer nos poinsettia pot 14 .
Du travail au top ,sans mal de dos pour les collaborateurs .



Testimonials



Kerisnel
PRODUCTEURS PAR PASSION

SCEA BREIZH PEPI
SCEA LE BERR



Testimonials

Et de nombreux autres



VHorticoles Viet



Kerisnel
PRODUCTEURS PAR PASSION



HORTIVAL
diffusion



**BOURGOGNE
PLANTES**



Les Serres
DU MERIOT



laugourdeau
PLANTES & PLANTS

SAS LEBLANC

DB PLANTES



MAISON
Barrault
Horticulteurs passionnés

**EARL DE PEN
PARCOU**

Contact

TROOPER



Request an on-site demonstration!

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Informations, photos et videos :

🌐 instar-robotics.com

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videos !



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